

ABSTRACT

A DC-DC converter 111 with a switching element Q11 changes a supply of power to a HID lamp DL1. On/off of the element Q11 is controlled with a control circuit 13. The circuit 13 controls an on/off state of the element Q11 with constant lamp power control on stable operation of the lamp. The circuit 13 controls the on/off state of the element Q11 so as to provide the lamp with lamp power larger than lamp power by the constant lamp power control based on high power control for a period of time that the lamp is on. It is possible to keep temperature of electrodes and within a bulb of the lamp in a proper state through simple control, and to prevent flicker generation and electrode degradation.